



## Materials Declaration Form

<b>IPC Form Type *</b>	1752 Distribute	<b>Version</b>	2
<b>Sectionals *</b>	Material Info Manufacturing Info	<b>Subsectionals *</b>	A-D <i>* : Required Field</i>

Supplier Information			
<b>Company Name *</b>	STMicroelectronics	<b>Response Date *</b>	2018-04-27
<b>Company Unique ID</b>	NL 008751171801		
<b>Contact Name *</b>	Refer to Supplier Comment section		Refer to Supplier Comment section
<b>Contact Phone *</b>	Refer to Supplier Comment section	<b>Contact Email *</b>	Refer to Supplier Comment section
<b>Authorized Representative *</b>	Giovanni Giacobello	<b>Representative Title</b>	ADG MD CHAMPION
<b>Representative Phone *</b>	Refer to Supplier Comment section	<b>Representative Email *</b>	Refer to Supplier Comment section
<b>Supplier Comment</b>	Online Technical Support - STMicroelectronics : <a href="http://www.st.com/web/en/support/support.html">http://www.st.com/web/en/support/support.html</a>		

**Uncertainty Statement**

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**Legal Statement**

<b>Supplier Acceptance *</b>	true	<b>Legal Declaration *</b>	Standard
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**Legal Statement**

Supplier certifies that it gathered the provided information and such information is true and correct to the best of its knowledge and belief, as of the date that Supplier completes this form. Supplier acknowledges that Company will rely on this certification in determining the compliance of its products. Company acknowledges that Supplier may have relied on information provided by others in completing this form, and that Supplier may not have independently verified such information. However, in situations where Supplier has not independently verified information provided by others, Supplier agrees that, at a minimum, its suppliers have provided certifications regarding their contributions to the part(s), and those certifications are at least as comprehensive as the certification in this paragraph. If the Company and the Supplier enter into a written agreement with respect to the identified part(s), the terms and conditions of that agreement, including any warranty rights and/or remedies provided as part of that agreement, will be the sole and exclusive source of the Supplier's liability and the Company's remedies for issues that arise regarding information the Supplier provides in this form.

Product				
Mfr Item Number	Mfr Item Name	Version	Mfr Site	Date
BTA16-800CWRG	7BVT*168SBL1	A	SH1A	2018-04-27
	Amount	UoM	Unit type	ST ECOPACK Grade
	2180	mg	Each	ECOPACK® 2
	Comment	ECOPACK® 2 is STMicroelectronics trade name for ROHS compliant device without Brominated and Chlorinated compound (900ppm) and without Antimony oxide flame retardant ( in each organic material)		

Manufacturing information				
J-STD-020 MSL Rating	Classification Temp	Nbr of Reflow Cycles		 life.augmented
Not Applicable	Not Applicable	Not Applicable		
bulk Solder Termination	Terminal Plating	Terminal Base Alloy	Comment	
Not Applicable	Tin (Sn), matte, annealed	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape	
SIP	10,15.5,4.5	3	Through-hole	
Comment	Package: TO 220 I CLIP			

QueryList : RoHS Directive 2011/65/EU-July 2011 – Annex II amended by Directive 2015/863-April 2015	
Query	Response
1 - Product(s) meets EU RoHS requirement without any exemptions	FALSE
2 - Product(s) meets EU RoHS requirements except lead in solder and this usage may qualify under the lead in solder '7b' exemption (other selected exemptions may apply)	FALSE
3 - Product(s) meets EU RoHS requirements by application of the selected exemption(s)	TRUE
4 - Product(s) does not meet EU RoHS requirements and is not under exemptions	FALSE
Exemption Id.	Description
7a	Lead in high melting temperature type solders (i.e. lead- based alloys containing 85 % by weight or more lead)
7c-I	Electrical and electronic components containing lead in a glass or ceramic other than dielectric ceramic in capacitors, e.g. piezoelectronic devices, or in a glass or ceramic matrix compound

QueryList : California Prop65 list, dated 15th December 2017			
Query			Response
1 - The product does not contain identified substance from California Prop 65 List, no exposure to consumers is foreseen			FALSE
2 - The product is containing below substance(s) from California Prop 65 List, no exposure to consumers is foreseen			TRUE
Substance	amount in product (mg)	Application	ppm in product
Nickel	0.65	Die - Ceramic	298
Lead	47.02	Soft solder	21568
Lead-Borate Glass	1.96	Die - Ceramic	900

QueryList : REACH-15th January 2018				
Query				Response
1 - Product(s) does not contain REACH Substances Of Very High Concern above the limits per the definition within REACH				true
CategoryLevel_Name	CategoryLevel_Threshold	amount in product (mg)	Application	ppm in product

Material Composition Declaration : note : Substance present with less 0.001mg will not be declared in this document						Mfr Item Name	7BVT*1685BL1					
Homogeneous Material	Material Group	Mass	UoM	Level	Substance Category	Substance	CAS	Exempt	Mass	UoM	Concentration in homogeneous material (ppm)	Concentration in product (ppm)
Die	M-011 Other inorganic materials	39.912	mg	supplier	die	Silicon (Si)	7440-21-3		8.947	mg	224168	4104
				supplier	metallization	Gold (Au)	7440-57-5		0.034	mg	852	17
				supplier	passivation	Nickel (Ni)	7440-02-0		0.179	mg	4485	82
				JIG - R	Passivation	Lead (Pb)	7439-92-1	7c-I-Electrical and e	28.486	mg	713720	13067
				supplier	Passivation	Silicon Oxide	7631-86-9		0.051	mg	1278	23
				supplier	back side metallization	Gold (Au)	7440-57-5		0.011	mg	276	5
Leadframe	M-004 Copper and its alloys	1587.691	mg	supplier	back side metallization	Nickel (Ni)	7440-02-0		0.243	mg	6088	111
				JIG - R	glass coating	Lead-Borate Glass	65997-18-4	7c-I-Electrical and e	1.961	mg	49133	900
				supplier	alloy	Copper (Cu)	7440-50-8		1586.960	mg	999540	727963
				supplier	alloy	Iron (Fe)	7439-89-6		0.731	mg	460	335
				JIG - R	solder	Lead (Pb)	7439-92-1		8.927	mg	935058	4095
				supplier	solder	Tin (Sn)	7440-31-5		0.477	mg	49963	219
Soft solder	Solder	9.547	mg	supplier	solder	Silver (Ag)	7440-22-4		0.143	mg	14979	66
				JIG - R	solder	Lead (Pb)	7439-92-1		7.644	mg	849994	3506
				supplier	solder	Antimony (Sb)	7440-36-0		0.899	mg	99967	412
Soft solder 2	Solder	8.993	mg	supplier	solder	Tin (Sn)	7440-31-5		0.450	mg	50039	206
				supplier	solder	Copper (Cu)	7440-50-8		31.625	mg	1000000	14507
				JIG - R	solder	Lead (Pb)	7439-92-1		7.644	mg	849994	3506
				supplier	solder	Antimony (Sb)	7440-36-0		0.899	mg	99967	412
				supplier	solder	Tin (Sn)	7440-31-5		0.450	mg	50039	206
				supplier	solder	Copper (Cu)	7440-50-8		31.625	mg	1000000	14507
Clip	M-004 Copper and its alloys	31.625	mg	supplier	clip	Copper (Cu)	7440-50-8		31.625	mg	1000000	14507
				supplier	mold compound	Silica, vitreous	60676-86-0		359.602	mg	760001	164955
				supplier	mold compound	Epoxy Cresol Novolak	29690-82-2		48.262	mg	101999	22139
				supplier	mold compound	Phenol resin	9003-35-4		28.390	mg	60001	13023
				supplier	mold compound	Others	Proprietary		23.658	mg	50000	10852
				supplier	mold compound	Metal hydroxide	Proprietary		9.463	mg	20000	4341
connections coating	Solder	6.314	mg	supplier	mold compound	Carbon black	1333-86-4		3.785	mg	7999	1736
				supplier	solder alloy	Tin (Sn)	7440-31-5		6.314	mg	1000000	2896
				supplier	ceramic	Alumina	1344-28-1		22.530	mg	989982	10335
Ceramic	M-011 Other inorganic materials	22.758	mg	supplier	ceramic	Nickel (Ni)	7440-02-0		0.228	mg	10018	105
				supplier	ceramic	Nickel (Ni)	7440-02-0		0.228	mg	10018	105